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(CBCS)

(2nd Semester)

BOTANY

SECOND PAPER

(Phanerogams)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. Gymnosperms are naked seeded because they lack

(a) embryo ()

(b) ovary ()

(c) seed coat ()

(d) endosperm ()

2. Coralloid roots of *Cycas* contain

(a) green algae ()

(b) brown algae ()

(c) cyanobacteria ()

(d) fungi ()

3. Verticillaster inflorescence is found in the family

- (a) Lamiaceae ()
- (b) Malvaceae ()
- (c) Brassicaceae ()
- (d) Asteraceae ()

4. Lodicules in the flower of Poaceae represent

- (a) sepal ()
- (b) petal ()
- (c) perianth ()
- (d) bracteole ()

5. Quiescent centre is present in

- (a) root apex ()
- (b) shoot apex ()
- (c) both root apex and shoot apex ()
- (d) vegetative apex ()

6. Tylosis are found in

- (a) sapwood ()
- (b) heartwood ()
- (c) periderm ()
- (d) secondary cortex ()

7. In angiosperm, the endosperm is

- (a) haploid ()
- (b) diploid ()
- (c) triploid ()
- (d) polyploidy ()

8. The type of embryo sac in *Peperomia* is

- (a) bisporic 8-nucleate ()
- (b) tetrasporic 4-nucleate ()
- (c) tetrasporic 8-nucleate ()
- (d) tetrasporic 16-nucleate ()

9. The timber-yielding plant *Shorea robusta* belongs to the family

- (a) Poaceae ()
- (b) Lamiaceae ()
- (c) Magnoliaceae ()
- (d) Dipterocarpaceae ()

10. From which of the following plant tea is obtained?

- (a) *Cocos nucifera* ()
- (b) *Coffea arabica* ()
- (c) *Camellia sinensis* ()
- (d) *Cuminum cyminum* ()

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write short notes on the following :

3×5=15

UNIT—I

1. Angiospermic characters of *Gnetum*

OR

2. Male cone of *Pinus*

UNIT—II

3. Head or capitulum inflorescence

OR

4. Floral characters of Acanthaceae

UNIT—III

5. Dicot leaf

OR

6. Secondary growth

UNIT—IV

7. Monocot embryo

OR

8. Double fertilization

UNIT—V

9. Scientific names and families of three spices-yielding plants

OR

10. Economic importance of pulses

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following :

10×5=50

UNIT—I

1. Write an account on the general characteristics and classification of gymnosperms. 10

OR

2. Write notes on any *two* of the following :

5×2=10

(a) Anatomy of leaflets of *Cycas*

(b) Structure of *Cycas* ovule

(c) Structure of female strobilus in *Gnetum*

UNIT—II

3. Give a brief account on Bentham and Hooker system of classification.

Discuss its merits and demerits.

4+6=10

OR

4. Give the distinguishing characters of any *two* of the following :

5×2=10

(a) Malvaceae

(b) Rosaceae

(c) Rubiaceae

UNIT—III

5. What do you mean by anomalous secondary growth? Explain the anomalous secondary growth in *Dracaena* stem with suitable diagram. 2+8=10

OR

6. Describe the anatomy of a monocot root with neat labelled diagram. 10

UNIT—IV

7. Give an account on any *two* of the following : 5×2=10
- (a) Microsporogenesis
 - (b) Development of dicot embryo
 - (c) Female gametophyte

OR

8. What is endosperm? Explain the different types of endosperm with suitable diagram. 2+8=10

UNIT—V

9. Describe the economic importance of the following plants mentioning their botanical names and families : 5+5=10
- (a) Cardamom
 - (b) Coffee
 - (c) Mustard
 - (d) Coconut
 - (e) Tea

OR

10. Write short notes on any *two* of the following : 5×2=10
- (a) Timber-yielding plants
 - (b) Cereals-yielding plants
 - (c) Fiber-yielding plants
